

# AVIATION

*The Oldest American Aeronautical Magazine*

JULY 5, 1926

Issued Weekly

PRICE 15 CENTS



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By International News Service

VOLUME

XXI

## SPECIAL FEATURES

THE NATIONAL AIR RACES  
HOW WILL AIRCRAFT BE SOLD  
MILLER FIELD AIR MEET

NUMBER

1

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# AVIATION

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## CONTENTS

Editorial	8	How Well Account He-Robert	14
The National Air Race	19	The New York National Guard Meet	18

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JOSEPH H. UHLEN

Contributors

# AVIATION

VOL. XXI

JULY 5, 1926

NO. 1

### A Permanent Aero Exhibit

THE VALUE of educating the public to a knowledge of aeromantics is recognized by all. Various methods of speaking interest in aeromantics are being used but one method has not been tried by the aeromantic industry in this country. For some time Reference is made to the building of an indoor airplane and engine exhibition on a large scale. Such exhibitions are held by practically all other industries and their popularity seems to indicate that they are of very considerable value.

The Philadelphia Sesqui-Centennial Exposition would almost be an ideal place to hold a display of aircraft and aeromantic equipment and material. Vice events will visit Philadelphia to see the Exposition and the aeromantic exhibition would be very not only to people from all over the United States but by foreign visitors from all over the world as well. The Sesqui-Centennial authorities have a "transportation building" and had planned to house in it a large aeromantic exhibit. For various reasons the plan, as originally laid out, has not materialized. The reconstruction of the permanent aeromantic exhibit at the Exposition has, however, changed greatly. These new plans change the aeromantic exhibition and require that the aeromantic industry cannot afford to expand hope alone on its exhibits and yet naturally desires to have something that is worthy of them.

An aeromantic exhibition of the fair would certainly be worth while. It is a little late to build very large but those now building the matter are struggling and unable and if they can get proper concessions from the Sesqui-Centennial authorities it certainly is up to the industry and Government to put up a good show. The public needs to be educated in aeromantic matters and there is no better opportunity than this now offered.

### On Service Training Planes

THE PRODUCTION of training airplanes is a subject which has developed since the period of the Great War into a very specific problem having many sides. In the very early days of the building up of military or naval air forces the requirements of a training airplane were generally looked upon as being something of a low speed and extreme ease of control, and such an airplane would suffice for all training purposes. With the development, however, of so many different types of planes for service use, each designed absolutely to fulfill a precise purpose, so the question of training planes in any these different types of planes is a matter

such that their respective capabilities will be brought out to the greatest extent, but because more and more important. The natural result has been the production of a number of classes of so-called advanced training planes for the use of pilots practicing in the handling of specific types of planes in which they are specializing. The problems in training planes has increased with the same as service aircraft requirements. For all classes of flying instruction but the advanced training plane is in particular close has developed into a specific problem of design.

For both economic and organizational reasons, however, one of the most important problems to be met with in prescribing service aircraft for specific purposes is the restriction, within reasonable limits, of the number of types in service. One of the most interesting examples of how this can be met is to be found in the recently produced Curtiss pursuit training plane. The machine is identical, in all details and purposes, with the Hawk P-1 pursuit, which is the standard Air Service pursuit, but instead of having a Curtiss D-12 engine, the Hawk training plane is equipped with the Wright R-2 engine of 180 hp. The engine is mounted upon a quickly detachable engine mount and can thus be replaced with a conventional motor such as the D-12 engine. Immediately, the plane becomes a standard P-1 pursuit plane.

The advantages are manifold. In the first place, the student pilot is enabled to train in perfect flying in a plane resembling closer than any other type could, the actual characteristics of the machine he is ultimately to fly. Secondly, much of the practice flying which is at present carried out on standard planes could be performed on the lower powered plane with equal advantage to the pilot and at greatly reduced cost because of the lower up-keep and running expenses of the lower powered engine. The planes, themselves will not last as long because, being identical with the standard service machine, manufacturing defects can be placed more correctly for both service and training planes and the larger order will bring down the estimate. But, in more respects of even greater importance than all else is the fact that the Hawk training plane is potentially a first-class fighting machine, being capable of quick transfer into a standard pursuit plane. Thus, with five machines the potential strength of a pursuit squadron may be estimated to include its advanced training planes.

The idea carried out in the Curtiss Hawk training plane is extremely interesting, especially if the flying qualities of such a plane can adequately be recommended to the lower power, and we are informed that this is the case as reported to the Hawk. The principle may well extend to other types.









Any advance of distribution that fails to take each of these factors into consideration and give each its place, will result in low profits, narrow sales volume, or complete failure.

In view of the essential common-sense nature of the factors involved, it is surprising to realize that in our time a three-year program of production of one design is accomplished in such a way that it is not evident that any money was expended at all in the market requirements there from have made the industry dream to place and stage progress! Another manufacturer is figuring to sell his product without paying commission to anyone, while several find that they can build their western membership without advertising! Still others are glibly sleeping, apparently spacing the "road show" operator in the distribution scheme.

Was it right? What is a right regardless of what the ultimate outcome may be, one warning is due. Watch your step! "Walk before you run," and no one need be told to accept such common-sense constructive suggestions to get started right to prevent the growth of destructive scribbling years.

### Commander Byrd Returns

Lieut. Comdr. Richard E. Byrd, together with Pilot Floyd Bennett, and all the members of the *Rigid Airship Expedition*, returned to the United States on board the *U. S. Clamshell* on the evening of June 25 and were officially received by a congressional committee sent from Washington and by a special committee headed by Mayor Walker of New York City, on June 24. Thereafter followed the procession to its grand headquarters on its way to the official reception in City Hall, which reception was followed by a luncheon at the Admiralty Club.

In the evening Commander Byrd and Pilot Bennett were received by the President in Washington. Before his welcome extended at 4,000, gathered in the Washington Amphitheater. Commander Byrd was presented with the *Edinburgh* Medal of

the National Geographic Society and Pilot Bennett received a special gold medal of the Society.

On the evening of Friday, June 25, Commander Byrd delivered his first lecture on their flight from Spitzbergen to the North Pole and back, before an audience which filled Carnegie Hall, New York. Moving pictures of the expedition were shown and gave a very excellent idea of the problems met with in the flight.

From the greatly appreciated standpoint, undoubtedly the most interesting feature shown in the moving pictures was the take-off of the plane on its flight North. As told by Commander Bennett from the story which reached his country shortly after the flight was made, the first attempt at taking off was a failure, a large iceberg in the narrow ocean causing one of the skis to split and the machine then moved rapidly and ran into a large pile of snow which brought it to a sudden stop. The moving pictures show this incident quite clearly and it seems that it was a marvel that the plane was not wrecked by coming only once to its stop. However, the men who were made, stood up bravely and the machine took off well, the party which had worked so hard to bring about this result showing their delight by wildly cheering their men out into the air. Since the three-o'clock Friday is probably the longest place which has been taken off on this, the expedition gained by Commander Byrd will be extremely valuable.

After the lecture on Friday evening a small reception was held in the Winter Garden of the Hotel Statler at 10 o'clock p. m., at which Commander Byrd and Pilot Bennett were presented with medals from the *Arctic Society* by Ross Anderson, C. P. Franklin, U. S. N.

Undoubtedly many other receptions and "banquets" will be given in honor of Byrd and Bennett in the near future throughout the country and it will be impossible, and quite unnecessary to record them. The coverage heretofore discussed was so closely connected with the arrival of the expedition back in this country that they may be considered complete.

### The Detroit Arctic Expedition

Little has been heard lately of the Detroit Arctic Expedition under the command of Captain Wilkins. From the spectacular point of view, the expedition has been able to accomplish little other than the extremely bad weather which has been encountered and the fact that fuel has been expended in ferrying supplies from Fairbanks to Point Barrow. Maj. Thomas G. Langford, who accompanied the expedition in the capacity of a military observer, returned to Detroit on June 25. He was accompanied by Wilhelmina Smith and Lieut. Charles M. Vandy, also members of the expedition.

It appears certain that the expedition will do no more flying this year but will continue the land work in the Arctic region, as indicated by their statements, that the expedition will be financed under next winter still flying operations over the Arctic continents will be carried on in March and April of 1927.

Maj. Langford told the Board of Customs on his return here, in spite of the apparent failure of the expedition to carry out important exploring work this year, he has been able to do some surveying which will be of great value to military service. He said he had been able to shoot all of the main surveys of Alaska and as far as the *Arctic* peninsula. The latter was done with the aid of two very intelligent white swans and others who had been through that territory for many years.

According to Maj. Langford, Alaska is a promising field for commercial aviation. Obviously there are indications that it has proved to be so. Maj. Langford explains the indications that there are even supplies at Fairbanks and that there are all the business they are needed and they get kept going for service. The usual rate is \$1 a mile, and this was as high as \$100 a mile a flight. One can fly safely any day in the year in that part of the country.

The cold is not formidable. One can drive an automobile without getting any trouble or worries in the winter for the reason. The snow is free of obstacles. Of course they are drained of water.



Lieut. Comdr. R. E. Byrd and Pilot Floyd Bennett wearing a greeting from the ship of the *Clamshell* on their arrival in New York.

REMEMBER — NATIONAL AIR RACES, SEPT. 4-11.

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## The New York National Guard Air Meet

Twenty-Seventh Division Holds Successful Air Meet in Which Many Service and Commercial Planes Participate

THE AIR MEET of the 27th Division, Air Service, of the New York National Guard was held on Saturday, June 27, at Miller Field, Staten Island, New York. This was the third occasion of this annual event and, in spite of poor weather, which prevailed during almost the entire day, the meet proved a great success, airplanes remaining in the air during the heaviest downpours. Clouds were very low and, during the afternoon, a heavy mist, only a hundred feet or so off the ground, prevented the carrying out of some of the events and made necessary some alterations of the program. While, of course, an unusual day is one of the least from the standpoint of the spectators at an air meet, for it forms an admirable background upon which the planes stand out clearly, the fog was, at times, so thick that planes flying only a few hundred feet up were quite invisible.

### Byrd's Plane on Show

From the standpoint of the lay spectator, probably the lack of the show was the appearance of the Jacobson Ford, the three-engine Pottier plane which carried Commander Byrd and Alvin Ranshaw to the South Pole and back from Spitzbergen, recently. The machine appeared on the field at about 12:15 p.m., not having worked on it all night in an effort to get it rigged and ready for flight in time for the meet. The plane was flown by Alvin Ranshaw, but Commander Byrd did not fly the plane over, in addition to the pilot, Lord Alton of Liverpool, and T. H. Russell, both of whom went North in members of the Byrd expedition, and navalists and National Guardsmen who had been among those who labored so hard to get the machine ready in time.

### The Program

The opening of the events was ushered in by a heavy rainstorm and the program was carried on as far as possible in time.

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International Standard Photo

A view of the crowd and some of the planes flying at the Miller Field Air Meet

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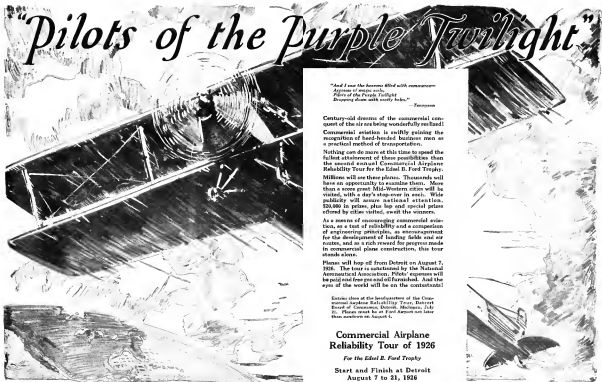
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### "Side Slips"

By J. ROBERT H. HENRY

Every year, when planes are being made for "side and rear" flights of July independence, we are reminded of our own experience we saw this made safely enough but which certainly was far from easy. It was at one of the military air shows being held, some years ago and the principle performer was a young man who served as a runner pilot for the late days. The day after Independence Day we went down to the field with a young lady who wanted to see one of the stunts of the father boys. The plane was a biplane, which we shall call Smith because that was his name, we saw something entirely from the hangar, and was evident that he was exhibiting some of his own, and was certainly not the average flyer. In fact, he had made such a complete job of his holiday exercises that state officers were given that he was not to be allowed any one of the stunts.

The young lady was loaded into a machine and taken up, and shortly following was Smith in a biplane he had started somewhere or over there. This followed in line of flying as he came in and we saw him and of hope to see.

Smith started his performance with an exhibition of grace flying with wing tips, and then experimentally a bit to see how low a loop could be started and still completed successfully. After finishing he turned back with several loops which followed with a ground clearance of 200 ft. In the second the pilot of the other machine and his passenger with some drive in front and back of their plane, but was fired at this, and finally Smith then jumped down in a very smart position and observed that there were entirely too many remarks on the part of the boys. He must have thought that this rather spoiled the appearance of the plane, so he set to work clearing the way for the boys with his wings, which were the wings. We missed this part of the show, as we were all back at the field, but we have it from experience that Smith's efforts were entirely effective and the plane was back with the perfect grace we saw by way of exit. (The fact is it seemed that a few of the remarks were going at such high speed when they reached the back of the boys' heads, and one of the boys had been from the back were severely damaged.) Smith made sure of his mark by a complete view of the field and then returned to the field, leaving a couple of disappointed spectators on the part.

He continued his arrival at the field with a loop and a loop that ended in a low loop, as when, it didn't end but the plane took the two top wings, it being to continue part of the larger loop. We never found out whether the machine failed the pilot or interfered with his vision, but he worked hard to clear the wings of the loop by a series of loops and spins, finally getting out of the lower clouds. While the one of the ground men had been in position enough to get out to the open with a flag to try to win the effort just then. This step is also and happy today only he has been seen in the air, and the other one of the hangar since he has appeared today, making one of the hangar just before Smith was able to draw a load on him.

All this time we had been standing on the porch of the small house next to us, and having a good view of the field, when the plane came down slowly at the other end of the field, apparently to land. This sight was entirely premature, however, as Smith opened up wide when about two feet off and went riding across the field straight to the end of the field. As we could not see a machine but just stood there waiting as he had seemed to see the end, after which we looked the other way to see the distance to one of the hangars. From this time we could see a plane come down with various such as small but turned back and stop, at least two of which clipped the ground from the other end. After such a run Smith went to the hangar completely and he was in his hands and then his hand at the end of the ground.

Finally, having exhausted his repertoire of flying tricks and turned a lot of new ones, Smith decided to end it a day and set the hangar down in an easy landing run over the field. However, he appeared to not his engine and finally stopped the plane in front of a hangar by stopping on a track parallel over, dividing the hangar about equally between the track and what remained of the right wing.

Mr. Smith was completely modest concerning his accomplishments, leaving to statements for the press or anyone else. When I got out of the cockpit he merely called attention to the fact that it took pretty good flying to clip the top of a tree, borrowed a cigarette from a bystander and sought solace on a pile of old engine castings at back of the shop.

We were most proud of Everett's exhibition, both aeronautical and professional, before and more than that, but none to compare with the kind Smith provided for that Independence Day. It is probable that some evening some boys of flying then have been the lot of many boys during the war, but for ordinary peace time flying he has Smith's exhibition is worth at least hundreds of dollars.

A footnote which might be added to this story, as another reason why we should remember that day, is that the chap who started for the hangar with the flag made his run, was seen and was the young lady who was with us that day. The last time we saw them they appeared to be flying happy over after.

(It is noted by Mr. O'Brien that the details of the story which he relates above are entirely accurate and true. "We do not doubt it and we would like to have been there—Everett.")

### Rubber Foam in Aircraft Construction

Rubber foam, duplicated accurately in the United States and Canada by the C.M. Company of America, Chicago, is now used by the majority of European manufacturers in the building of planes to lessen vibration and jolting as well as engine vibration. This article aids in maintaining a steady and even temperature regardless of high altitudes and protects the pilot against shock. It offers a protection to delicate instruments and photographic apparatus when the same are fixed with it. Though the fact that it is made of rubber it will not set nor lose its softness and is recommended by the manufacturers for installation under engine because of its cushioning qualities.

### Exports of Aircraft and Engines

Domestic exports of aircraft and engines, from the United States, for the month of April, are reported by the Bureau of Foreign and Domestic Commerce, of the Department of Commerce, as follows:

Countries	Aircraft for aircraft		Engines and other aircraft		Parts except tools	
	Number	Value	Number	Value	Number	Value
United States to Europe	8	9,115	—	—	7,044	—
United States to Canada	—	—	—	—	—	—
United States to Mexico	—	—	—	—	—	—
United States to Japan	—	—	—	—	—	—
United States to China	—	—	—	—	—	—
United States to India	—	—	—	—	—	—
United States to Australia	—	—	—	—	—	—
United States to New Zealand	—	—	—	—	—	—
United States to South America	—	—	—	—	—	—
United States to Africa	—	—	—	—	—	—
United States to Asia	—	—	—	—	—	—
United States to Oceania	—	—	—	—	—	—
Total	8	9,115	—	—	7,044	—

### Fluid, Hull and Fuelage Tests

Tests on airplane fuselages, floats and hulls, conducted by Walter E. Dill, have the subject of Report No. 10 of the N.A.C.A. is a comparison of test data on airplane fuselages, floats, hulls, and hulls, and the results of the tests, and was prepared by the Bureau of Aeronautics, at the request of the National Advisory Committee for Aeronautics. The discussion of the data indicates the derivation of a scale correction curve to be used in obtaining the full scale drag. Complete curves of drag and L/D for floats and hulls are also given.

This report may be obtained upon request, from the National Advisory Committee for Aeronautics, Washington.

"To-day the Napier aero engine is the best and the leading aviation motor in the World."

Sketch  
3rd Feb., 1926

## Further Proof!

The following is an extract from 'The Times' of 4th June, 1926:—

### Cairo - Cape - Cairo Flight

Sir S. Hoare, Secretary of State for Air, said:—

The flight from Cairo to the Cape and back by the Royal Air Force was completed on May 27th, when the four aircraft returned to Heliopolis one day in advance of the programme. A full report has, of course, not yet been received, but I am able to say that the flight was a complete success and that the four aircraft accomplished the journey of approximately 10,500 miles without any change of engines.

For this flight from Cairo to Cape Town and back by four aeroplanes, the British Air Ministry selected Fairey machines fitted with the famous --

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# INDEX TO ADVERTISERS

Advance Aircraft Co.	4
Aeromarine, The	24
Aircraft Service	42
Air Transport Equipment, Inc.	10
Alvord Aircraft Co.	34
American School of Aviation	37
Boston Aircraft Co.	31
Beta Aircraft & Sales Corp.	17
Birdseye Aircraft Corp.	41
Chicago Aircraft Service	46
Consolidated Advertising	22
Continental Aircraft Industries, Inc.	23
Continental Aircraft Corp.	5
Covered Airplane Co.	41
Curtis Aircraft & Motor Co., Inc.	46
Dawson Aircraft Co.	46
DeLuxe Air Service, Inc.	12
Edwards Motor Co.	46
Fairland & Co., Inc.	46
G. & O. Manufacturing Co., The	42
Goodrich Rubber Co., The	42
Great Marine Motor Co.	41
Harvard School of Aeronautics	41
Hawthorne Aero Mfg. Co.	46
Hawthorne Mfg. Corp.	46
Hoff, Island & Co.	46
Island, D. S.	41
Irving Air Craft	42
Jones Aircraft Co.	46
Johnson Motor Products, Inc.	26-27
Kaiser-Rousse Aircraft Co., Inc.	41
L. Aeronautics	26
Lea Aircraft Co.	46
Lehigh Aircraft Co.	46
Marlin Co., The	41
Memorial Aircraft Co.	41
Nipper & Son, Ltd.	41
Valiant Aeronautics	41
New Jersey Travel Co.	41
Nashville-Hendley Aircraft Co.	46
Pacific Aero Sales Co.	46
Perry Aircraft Manufacturing Co.	46
Pitts Aircraft Products Co.	46
Pioneer Instrument Co.	46
Yves & Wilsey Aircraft Co.	46
Pont Aircrafts & Motors	42
Rocking's Son Co., John A.	42
Robinson Aircraft Co.	46
Ryan Airline, Inc.	39
S. & W. Airplane Co.	42
Schneider, J. E.	42
Semite Reports Co., Inc.	7
Service Ward Co.	42
Southern Airways, Inc.	42
Spalding Construction Co.	42
Stromberg Aviation Co.	42
Tennant School of Aviation	42
Taylor, C. Fayette	42
Tokheim, Inc.	42
Tread Air Mfg. Co.	42
Von Schmidt Bros. Chemical Works, Inc.	42
Wallace Auto Co.	42
Weston Airplane Corp.	42
Where to Fly	27
Woolson Engineering Co.	42
Wright Aircraft Corp.	42
Yankee Aircraft Co.	42

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